Anesthetic Delivery Management of Multi-organ Systemic Scleroderma

Man Kuan Lei, Katherine Perryman, Peter Yeh, Jennifer Woodbury

Effect of SSc on pregnancy

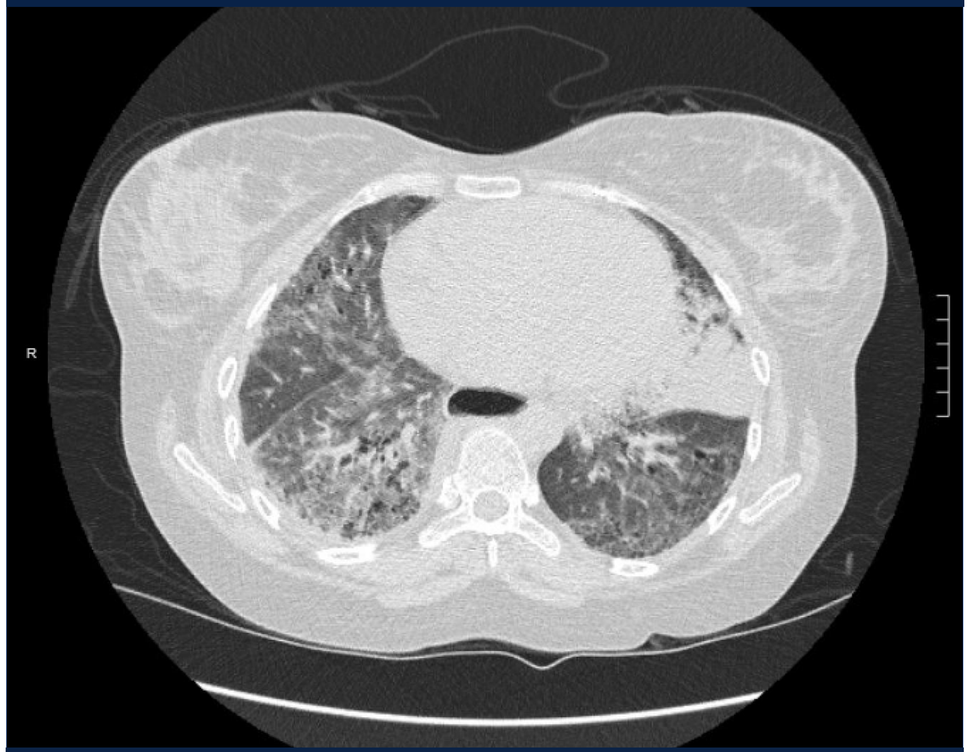
- Affects multiple organ systems
- Increased frequency of miscarriages and preterm deliveries
- Increased maternal and fetal risks
- Risk of hypertensive disorders is controversial
- Challenges in managing airway, hemodynamic, vascular access
- Certain antibodies associated with complications and worse outcomes
- Medication adjustments

Effect of pregnancy on SSc

- Generally well-tolerated
- Stable disease in majority
- Physiological changes exacerbate existing major organ dysfunction
- Cardiovascular and pulmonary considerations
- Improvement of peripheral vascular symptoms observed

Preconception counseling
Frequent monitoring
Multidisciplinary optimization

34-year-old G1P0 with SSc, severe interstitial lung disease (FVC 39%), pulmonary hypertension (RVSP 38 mmHg), Raynaud's, esophageal dysmotility



CT chest - stable chronic diffuse interstitial lung disease consistent with pulmonary manifestations of scleroderma and fibrosis

Pregnancy Course

- Aspiration pneumonia, worsening dyspnea
- 2-4L home oxygen
- Scl-70 – high risk of progression
- Deferred immunosuppressive therapy
- Low dose aspirin and prophylactic enoxaparin
- Planned C-section <37 weeks
- C-section at 34 weeks for fetal heart rate decelerations
- Stable intrapartum course
- ICU to floor on POD1
- Neonate: NICU for CPAP and prematurity
- Persistent dyspnea after discharge
  - Invasive mucinous adenocarcinoma

Anesthetic Management

- Skin thickening
  - Thyromental distance < 4 cm
  - Poor mouth opening
- Orthopnea, GERD
- Dural puncture epidural
  - Small increments of lidocaine w/ epi, bicarb
- Vasopressin 0.02 units/min
- Stable on 4L NC
- Crystalloids – 1L
- UOP – 100 mL
- QBL – 845 mL

Management

Pre-pregnancy

- Risk stratification
  - Pregnancy generally not recommended for FVC<50%
- Organ involvement
- Advise on maternal and fetal risks
- Medication adjustment
  - Lack safety data
- Antibody screening

Antepartum

- Increased cardiac and respiratory workload
- Serial TEE, labs, exams
  - PVR rise, RV function
- Home BP
  - Monitor for SRC
- SpO2 >94%
- Monitor GI symptoms
- Medication limitation
  - PAH treatment
- Increased fetal monitoring

Delivery

- Mode of delivery
- Early anesthesia evaluation
  - Airway risks
  - Aspiration precautions
  - Pulmonary & Cardiovascular Considerations
  - GETA vs Neuraxial
  - Vascular access
  - Avoid excessive fluid shifts
  - Avoid hemodynamic fluctuations
  - Anticoagulation

Postpartum

- Strict fluid balance
- Disease exacerbation up to 10%
- Medication resumption
- Fetal outcomes favorable
  - Common complications
  - Autoantibody transfer

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